



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,599	04/04/2007	Alain Guillard	Serie 6421	4539
40582	7590	07/28/2011		
American Air Liquide, Inc. Intellectual Property Dept. 2700 Post Oak Boulevard Suite 1800 Houston, TX 77056			EXAMINER GHOSH, INDRAJIT	
			ART UNIT 3785	PAPER NUMBER
			NOTIFICATION DATE 07/28/2011	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

IP-USOffice@airliquide.com  
julie.turner@airliquide.com  
yvonne.loftin@airliquide.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/583,599	<b>Applicant(s)</b> GUILLARD ET AL.	
	<b>Examiner</b> INDRAJIT GHOSH	<b>Art Unit</b> 3785	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2011.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 15-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/24/2011</u> .  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This action is in response to the amendment filed on 06/24/2011. Currently, claims 15-18 are pending and claims 1-14, 19, and 20 have been cancelled.

#### ***Claim Rejections - 35 USC § 103***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bianchi et al. (U.S. Patent 6,119,482) in view of Hill et al. (U.S. Patent 5,730,778) and further in view of Halimi et al. (U.S. Patent 5,560,208).

Bianchi et al. disclose in the figures a method for starting up an air-separation/metal-production installation comprising a system of columns (MP, DC, CM), means for feeding a booster compressor booster compressor ( $C_1$ ,  $C_2$ ) with compressed air and means for sending air from the booster compressor to at least one column of the column system and means for withdrawing a gaseous product (O) from one column of the column system in order to send it to the metal production unit. Although the booster compressors of Bianchi et al. are driven by turbines ( $T_1$ ,  $T_2$ ) Bianchi does not disclose the use of an electric motor with variable speeds and windings. Hill et al. disclose in Figure 10, a compressor (13) that is being driven by a variable speed motor (79) that can be an AC induction motor with a variable frequency/variable voltage supply (column 6, lines 50-67). Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have driven the booster compressors of Bianchi et

Art Unit: 3785

al. with the motor of Hill et al. in order to use electricity to run the booster compressors, which would allow for lower operation costs.

The combined teachings of Bianchi et al. and Hill et al. disclose all claimed limitations but fail to mention that the start up device runs faster during startup than normal state. Halimi et al. disclose, in Figure 1, a turbocharging system (10) for a diesel engine (12) that uses an electric motor (42) that facilitates start up of the engine. When the engine starts from idle, the motor runs at a high speed to increase turbocharger output. Once the exhaust from the engine can provide enough air to properly run the turbocharger, the motor is turned off, thus turning at a lower speed when the engine is at steady operation. Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teaching of Halimi et al. to run Bianchi's startup device faster during startup than normal state, in order to operate the apparatus as effectively as possible by providing more oxygen to the metal production unit during start up. This would mean the speed of the motor and the frequency of current to the motor is higher during startup of the metal production unit than during steady operation of the unit.

### ***Response to Arguments***

4. Applicant's arguments filed 06/24/2011, with respect to the drawings and claims 11-14 and 19-20 have been fully considered and are persuasive. All objections and rejections of the drawings and claims 11-14 and 19-20 have been withdrawn.

5. Applicant's arguments filed 06/24/2011 in regards to claims 15-18 on page 6, have been fully considered but they are not persuasive.

Art Unit: 3785

6. In response to applicant's argument that Hill et al. and Halimi et al. are nonanalogous (disparate) art to Bianchi et al., it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Hill et al. and Bianchi et al. each disclose methods for separating the components of air, and are, therefore analogous to each other. Further, the Hill et al. reference was submitted in the IDS dated 06/20/2006 by the applicant, which shows that applicant felt that it was pertinent enough to include. Halimi et al. and Bianchi et al. each disclose a motor that runs at a higher speed during start up speed than at steady-state operation in order to facilitate start up, thus, solving the same problem.

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 3785

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to INDRAJIT GHOSH whose telephone number is (571)270-1879. The examiner can normally be reached on Monday - Thursday, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Swann can be reached on 571-272-7075. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/I. G./  
Examiner, Art Unit 3785

/J J Swann/  
Supervisory Patent Examiner, Art  
Unit 3785

July 07, 2011